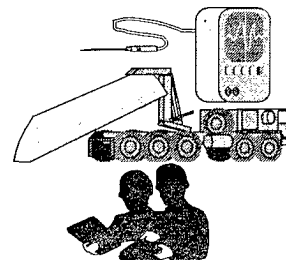
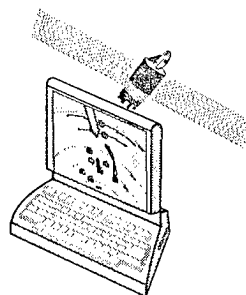
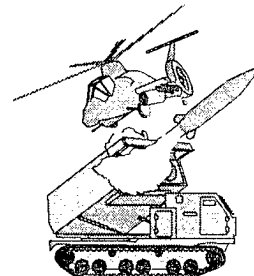
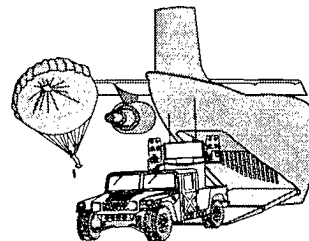
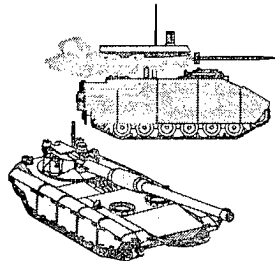


How to Do Business With Battle Labs



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A GUIDE FOR INDUSTRY

2nd Edition

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Introduction

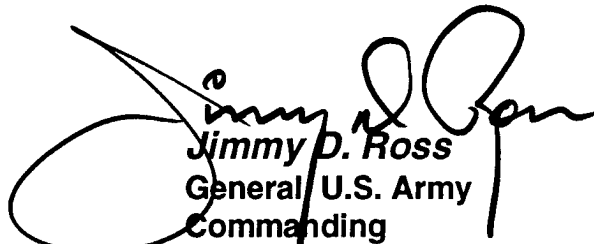
The Army of the late 1990's and the 21st century will be significantly different from today's Army. As the Army is reshaped into a smaller, contingency oriented, power projection Army, the imperative to maintain a technologically superior force has never been more important.

The establishment of Battle Labs provides part of the foundation for this reshaping process, a means for streamlining materiel acquisition and a new opportunity for industry to participate in Army programs. Battle Labs will serve as a practical mechanism for working with new ideas and assessing new capabilities provided by advanced technology.

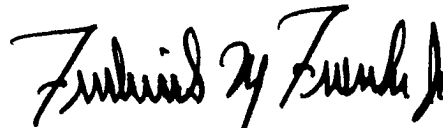
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Partnership among industry, academia, sister Services and the Army community will ensure the most effective technologies, components and systems are available in the force at the earliest time and at an affordable cost for the Army of the future.

We look forward to your support and participation.



Jimmy D. Ross
General, U.S. Army
Commanding
U.S. Army Materiel
Command



Frederick M. Franks, Jr.
General, U.S. Army
Commanding
U.S. Army Training and
Doctrine Command

Army Strategy

The Army's mission is power projection in defense of national interests. The necessary reshaping of the Army, in the face of reductions in dollars and people, requires a new reliance on technology and a new technology strategy. This strategy is based on a decrease in large procurements and an increase in upgrades of existing systems by inserting new technology.

The Army technology strategy includes pursuing the most cost effective advanced technologies to ensure the technological edge. Simultaneously, cycle time from laboratory to production must be reduced; otherwise the advantage of developing a leading edge technology is lost. Advanced Distributed Interactive Simulation and Advanced Warfighting Demonstrations will be used extensively to improve the

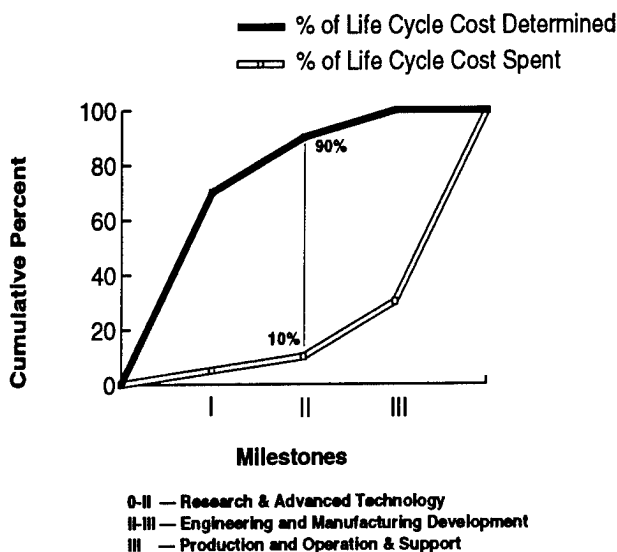
definition of requirements.

Experience shows that, at the transition from technology development to the engineering and manufacturing development phase, at Milestone II, only about 10 percent of the system's life cycle cost has been spent. However, decisions have been made that predetermine as much as 90 percent of the system's life cycle cost (*Figure 1*). The Battle Labs are designed to provide hands-on user involvement during this highly leveraged early part of the requirements and acquisition process. Better early planning will result in more effective systems and lower life cycle costs.

The Advanced Concepts and Technology (ACT II) Program will support the Battle Labs' requirements for rapid insertion of new technologies into systems. Components and experimental systems will be tested iteratively, demonstrated and evaluated for military value. To a much greater degree than in the past, this process will be based on simulation of both the physical system and its battlefield performance. Priorities based on the outcome of Advanced Warfighting Demonstrations and other tests and analyses will lead to the development of the most critically needed systems, system upgrades and advanced concepts for continuous modernization.

Deeper insight into the Army vision and strategy for technology development and transition can be gained from the Army Science and Technology Master Plan.

Figure 1



Battle Labs Strategy

The U.S. Army Training and Doctrine Command (TRADOC) has organized six Battle Labs to identify, develop and experiment with new warfighting concepts and new capabilities offered by emerging technologies. This initiative is a response to the unpredictability of the world situation, where a rapidly-changing array of direct and indirect challenges have replaced the single, well-defined external threat which drove doctrine and materiel requirements during the Cold War era.

Battle Labs are focal points for examining the latest concepts of battle-field organization, tactics, doctrine and technological capabilities. They facilitate the flow of new ideas, examine battlefield dynamics and the capabilities offered by new technologies for their impact on the battlefield of the future, and integrate promising concepts across the Army.

There has been a long history of Army experimental activities such as the Louisiana Maneuvers, and more recently, the 9th Infantry Division High Technology Test-bed. Each in its own way contributed to the contemporary understanding of the interdynamics between doctrine, training, leadership, organization, materiel and the soldier. Battle Labs will help the Army prepare for the challenges of the next century. Unlike the people-intensive Louisiana

Maneuvers of the 1940s, electronic simulation will provide a basis for the Louisiana Maneuvers of the 1990s and beyond.

Today, the Army's challenge is to make conceptual leaps, conceiving new ways to organize, project power, respond to ill-defined crises, and deploy and sustain our forces. These conceptual leaps will require new capabilities from the materiel systems supporting the Army of the future. A catalyst for these conceptual leaps, Battle Labs provide a means by which the Army can systematically examine warfighting ideas and evaluate the options offered by new technical capabilities.

Battle Labs will be linked electronically to each other, TRADOC Schools, the Army R&D Community, sister services, and DoD and national agencies. They all are organizing to take advantage of the technology of DIS, which was not available to earlier test-bed operations. Simulation networks will allow experts at the relevant TRADOC Centers and Schools — the people who think, write and teach warfighting — to advance ideas and test them by computer simulation synergistically at a number of locations. Battle Lab efforts will result in rewriting doctrine when needed and harnessing emerging technical capabilities to create new warfighting capabilities.

Industry will benefit from access to a

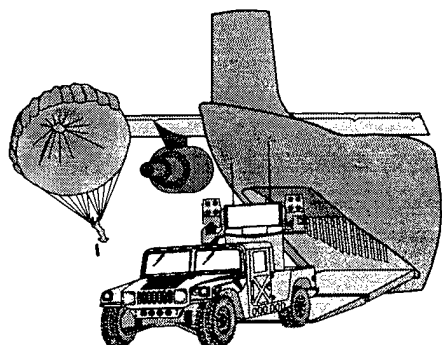
pool of Army thinkers and an opportunity to test ideas in the field or have them simulated on an electronic battlefield. Enhanced cooperation among industry and Army military and technical experts will allow for quicker and more effective tradeoff studies, providing clearer, more realistic definitions of requirements in less time and at lower costs. The free flow of ideas and information engendered by Battle Labs will be different from anything the Army has tried on a large scale.

The following is a short description of each of the six Battle Labs. Each begins with the doctrine outlined in FM 100-5 and each has developed the operational requirements listed to indicate more specific technical areas of Battle Lab interest.

The Early Entry Lethality and Survivability Battle Lab is located at Fort Monroe, Va. The Early Entry Force concept must be versatile enough to fight its way in, fight simultaneously with deploying forces, and fight after

deployment. The battle lab will focus efforts to:

- Optimize lethality of the Early Entry Forces
- Lighten armored forces to deploy in one half time less lift
- Develop offset Intelligence Prepara-



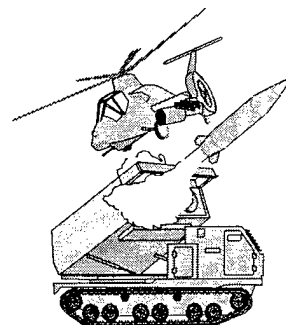
tion of the Battlefield capability

- Capitalize on SOF and other services to enhance lethality and survivability

The lead for coordination of AMC support is the Missile Research, Development and Engineering Center at Redstone Arsenal, Ala.

The Depth and Simultaneous Attack Battle Lab is located at Fort Sill, Okla. Its concept must take into account simultaneous engagement of enemy forces throughout the depth of the battlefield in all three dimensions. The Battle lab will focus efforts to:

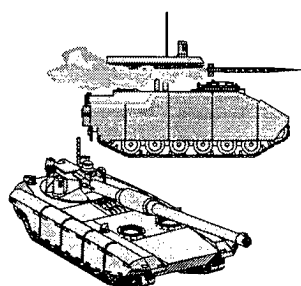
- Leverage technology to Increase accuracy of first round kills
- Detect enemy at maximum depth and provide near-real-time intelligence and targeting information



- Link Intelligence and Electronic Warfare with attack systems to optimize precision targeting

The lead for coordination of AMC support is the Armament Research, Development and Engineering Center at Picatinny Arsenal, N.J.

The Mounted Battle Space Battle Lab is located at Fort Knox, Ky. The concept behind this battlefield dynamic is to engage the enemy outside his engagement range capabilities, both day and night, and to disperse forces but not effects. The battle lab will focus effort to:



- Optimize situational awareness and target hand-off
- Optimize survivability of the mounted force
 - Expand multiple capabilities to acquire and kill armored targets, day and night, at long range
 - Optimize horizontal integration of digitized information flow, brigade and below
 - Determine optimum force design of reconnaissance and section elements, brigade through corps

The lead for coordination of AMC support is the Tank-Automotive Research, Development and Engineering Center at Warren, Mich.

The Dismounted Battle Space Battle Lab is located at Fort Benning, Ga. The idea behind it is to engage the enemy outside his engagement range capabilities, both day and night, and to disperse forces, but not effects. This Battle Lab focuses on efforts which:

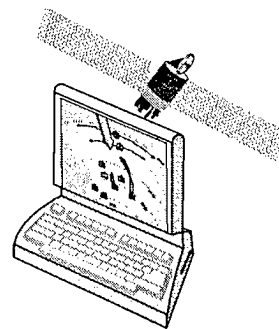
- Optimize night fighting capability of combined arms forces
- Improve target acquisition capabilities for combined arms forces



- Enhance the lethality of dismounted forces
- Improve the survivability of individual soldiers

The lead for coordination of AMC support is the Natick Research, Development and Engineering Center at Natick, Mass.

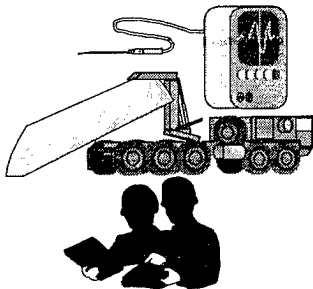
The Battle Command Battle Lab has elements located at Fort Leavenworth, Kan. and Fort Gordon, Ga. It is responsible for all combat and force development efforts required to enhance the command of the combined arms force. Fort Leavenworth addresses the "art" of the command while the Signal Center at Fort



Gordon addresses the "means" of command. This Battle Lab focuses on efforts which:

- Develop robust, on-the-move command and control capabilities
- Optimize Combat Service Support battlefield automation
- Optimize the horizontal integration of digitized information

The lead for coordination of AMC support is the Communications-Electronics Research, Development and Engineering Center at Fort Monmouth, N.J.



The Combat Service Support

Battle Lab is located at Fort Lee, Va. It incorporates the idea of versatile logistics at all levels with near total asset visibility and split based operations capability. This Battle Lab focuses on efforts which:

- Develop effective total distribution management system with total asset visibility

- Optimize soldier and system sustainment

- Improve logistics communications and automation

- Optimize logistics force design to best support Force Projection Army

The lead for coordination of AMC support is the AMC Deputy Chief of Staff for Logistics at Alexandria, Va.

Simulation Strategy

The Battle Labs are actively involved in developing simulation capabilities to be used in experimenting with warfighting technology concepts.

Simulation technology is emerging that will profoundly affect how many national defense activities are performed; and that will enable wholly new capabilities and opportunities for nearly all aspects of defense. Synthetic environments, where DIS, and underlying models are connected together from remote locations to cooperatively form highly realistic environments for use in meeting the rapidly changing defense

challenges. These environments can assume many different functions and forms. They can range in size from small units to theater-level battlefields of stunning synthetic realism. They can function as devices ranging from computer-aided design stations to synthetic factories manufacturing and assembling future military systems of substantial complexity and capability. Synthetic environments can integrate warfighting systems, command and control systems, trainers, logistics and support systems, test systems, computer analyses, and simulated future systems and processes.

The development and use of a

common, combined arms synthetic battlefield environment which serves developers, testers, and trainers affords the Army both significant opportunity and challenge. Capabilities provided by DIS synthetic environments offer a new way of doing business which can both shorten the process and reduce the costs for developing and evaluating concepts, requirements, and prototypes. These same capabilities can also provide the environments for developing and sustaining increased levels of readiness through improved training and mission rehearsal. In exploiting these opportunities, the Army faces the challenge of introducing new methods, processes, and procedures for use of synthetic battlefield environments — a change in culture.

With synthetic environments, new warfighting concepts and capabilities can be quickly represented in a combined arms battlefield context with real soldiers in the loop. Concurrent with the introduction of the concept or capability, a hypothesis of the warfighting benefit can be formulated, accompanied by the measures of performance and effectiveness which will be used to assess the military worth of the concept. At the same time, tactics and doctrine will adjust to obtain optimum battle dynamics. Also, training strategies and training develop-

ment “prototypes” can begin to evolve.

For industry to demonstrate materiel concepts in Battle Labs warfighting demonstrations, it may be necessary to represent hardware in software form to simulate its warfighting potential on the electronic battlefield. An investment in learning the entry modes and developing simulation tools will allow networking directly into the future DIS.

Synthetic environments will not completely replace hardware demonstration as a means of introducing new capabilities to the user. However, given the increasing cost of hardware development and test, contrasted with the decreasing cost and increasing fidelity of reconfigurable simulators, the emphasis will certainly shift over time.

The proponent for the DIS Program is the Office of the Assistant Deputy Chief of Staff for Operations and Plans at Headquarters, Department of Army in Washington, D.C. The Functional Manager is the TRADOC Analysis Command at Fort Leavenworth, Kans., and the Technical Manager is the U.S. Army Simulation, Training and Instrumentation Command (STRICOM) at Orlando, Fla.

Process for Industry Involvement

Industry participation is vital to the success of Battle Labs. In order to engage effectively with Battle Labs, there must be a common understanding of what the interaction process is and how it will work.

An important management innovation is the Battle Technology Team (BTT) which will support each Battle Lab. These *ad hoc* groups are tailored as needed for each specific mission, and will include members from the Battle Lab and its AMC supporting agency with others as needed from Research, Development and Engineering Centers (RDEC), the Test and Evaluation Command and/or the Army Research Lab (ARL). These cross-functional teams will bring together technical, program-management and military expertise supported by the infrastructure — legal, procurement, financial, international and foreign disclosure — of existing AMC and TRADOC organizations.

Figure 2 (see pages 10-11) is a model for industry interaction. The intent is to provide structure and order to the process, using as many in-place mechanisms as possible. In this figure, the shaded box represents pre-requirement activities between Battle Labs and industry partners. This is a new concept of dialog with industry to identify ideas and concepts for potential future battle-field capabilities. Product feasibility demonstrations may be conducted as part of this activity. Two formal entry

points into activities may lead to procurement activity. In the first (*Block 1*), the government may initiate Battle Lab-related procurement action through a solicitation. Industry then responds with proposals or information (*Block 2*). In the second entry point (*Block 3*), industry may initiate action by means of an unsolicited proposal or a proposal for product demonstration such as a Concept Evaluation Program (Ref. AR 73-1) which should be coordinated with the Battle Lab point of contact listed on page 17. Independent R&D projects also may address Battle Lab-related problems, but are not subject to the contracting process shown in Figure 2.

The government sponsor will review proposals and advise appropriate decisionmakers on selection and funding (*Block 4*). Contracts will be let and managed through an AMC or TRADOC procurement office supporting the Battle Lab (*Block 5, Block 6*).

Testing and evaluation may be performed at a government or contractor site (*Block 7*). Since the objective of each Battle Lab is to determine the potential military value offered by a new capability as early as possible, products of these efforts will typically be software models or early-stage “austere prototypes” such as “breadboards” or “brassboards” without the full functionality of complete fieldable systems or components. Contractor support of tests may be specified in the basic contract, and, when appropriate, use of Army test facilities may be

provided. Testing is likely to be informal and may involve an iterative model-fix-model or test-fix-test cycle. This will help Army representatives understand and optimize the performance of the item under simulated military conditions. For soldier tests of prototype hardware, safety and health of the testers must be assured.

The government will determine the next appropriate step (*Block 8*). Considerations will include perceived military value,

technical performance and maturity, need or opportunity to insert the technology into a system, and available funds. Options include further exploration, development of a requirement document or termination of the effort.

For the convenience of industry, a single office at each Battle Lab is indicated on page 17. That office will effect all necessary coordination and is a primary information source for industry.

Assistance & Information

The Army Materiel Command **Information for Industry Program** is designed to keep industry informed of Army needs and planned procurements. A key component is the Technical and Industrial Liaison Office (TILO) system. The AMC TILO (*listed in a directory along with other key agencies on pages 18 and 19 of this guide*) has a large volume of general information for industry and can provide contact with the TILO at each RDEC and ARL. These local TILOs coordinate the Advance Planning Briefings for Industry sponsored frequently by each RDEC and ARL, which provide information on program plans and upcoming solicitations. An

APBI Master Schedule is distributed by the AMC TILO. TILOs also can certify a company for the Army Potential Contractor Program, which authorizes "need to know" access for classified and other limited-distribution information.

Electronic Bulletin Boards (EBBs) are a new medium being used by the Army to share information between the government and the industrial and academic community. STRICOM and Army Research Office (ARO) have both established EBBs to provide the status of potential and actual, projects during development, acquisition and other phases. The account users will be required to complete the application that is posted on the system and once the

Process for Industry Involvement

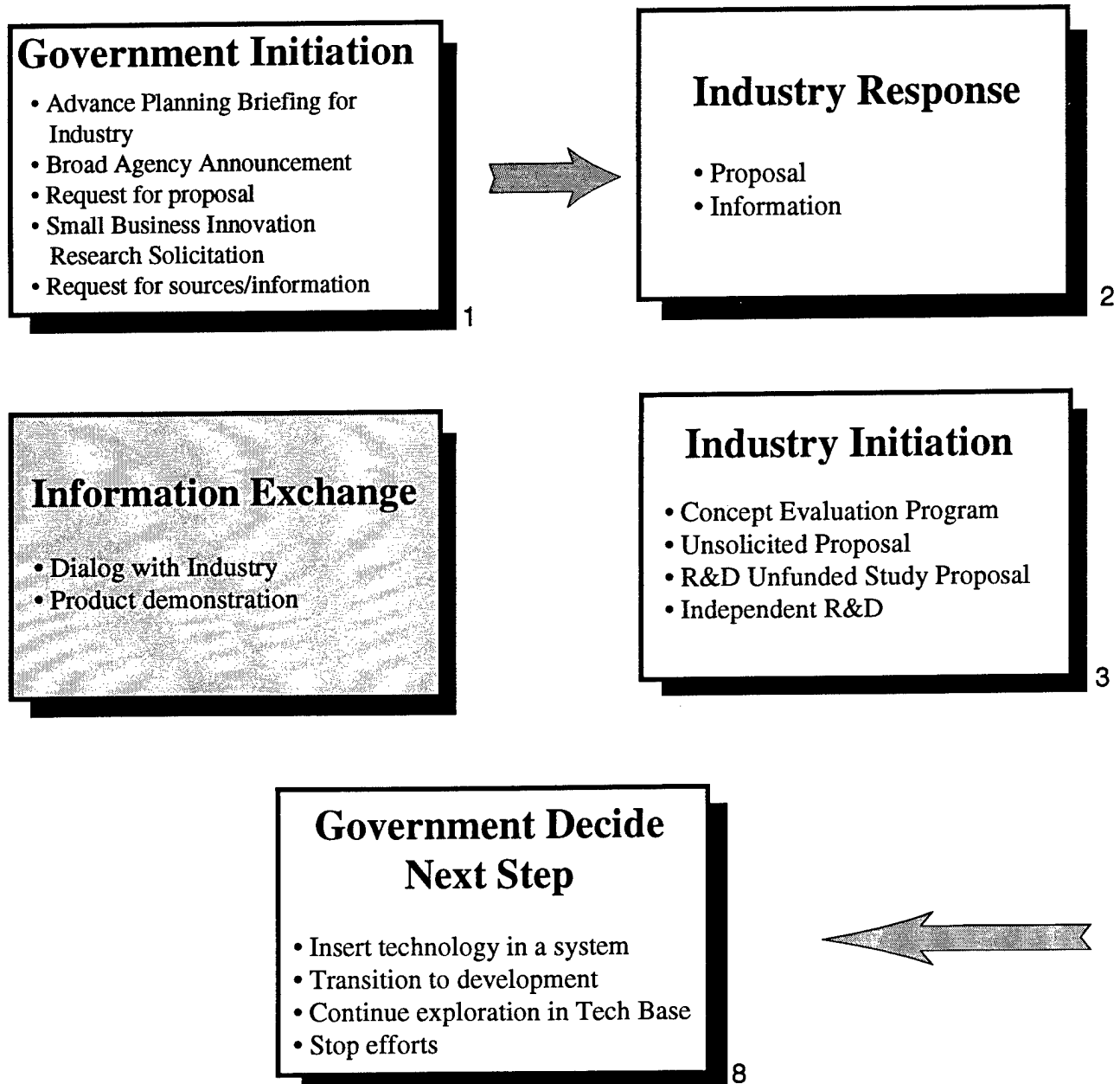
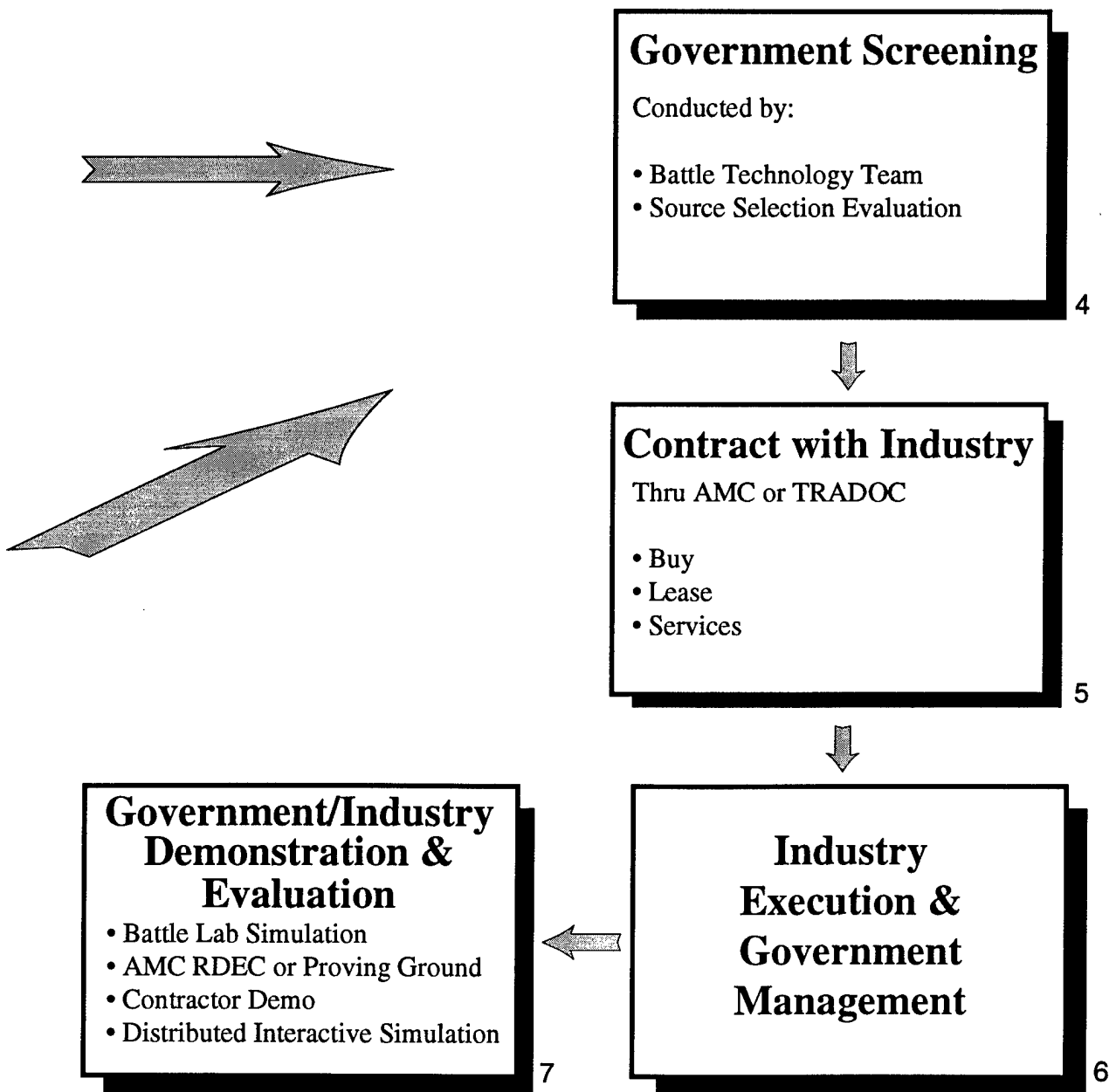


Figure 2

Industry participation is vital to the success of the Battle Labs and this chart outlines potential interactions. The shaded block represents pre-requirement informal exchange of information, while the numbered blocks represent procurement-related activity. There are two formal points of entry that may lead to contracts:

1. The government may initiate a solicitation.
2. Industry responds with proposals or information.
3. Alternatively, industry may initiate action by means of a proposal or an Independent R&D effort.



4. The government determines which proposals will be funded.
- 5 & 6. Contract(s) are let and managed through a TRADOC or AMC procurement office.
7. Testing may be by simulation or hardware demonstration. It may involve model-fix-model or test-fix-test iteration.
8. The government will determine whether the technology offers useful capabilities, and if so, how to exploit it.

application is approved, access will be allowed. STRICOM's EBB, designated the STRICOM/Industry/Academe Bulletin Board (SIA BB), will operate at up to 9600 baud with modem settings of 8 bits, 1 stop bit, and no parity. Data regarding future and in-process projects and acquisitions, including DIS-related activities, are available as both text files and self-extracting compressed files. The STRICOM telephone numbers for establishing accounts are (407) 381-8666/7/8/9. The ARO has also established an EBB to provide access to the ACT II BAA and related information. It will operate at 2400 baud with modem settings of: N-8-1. The telephone number for access and establishing an account is (919) 549-4301.

The TRADOC Battle Lab Integration and Technology Directorate has established a toll-free information line (1-800-552-3357) and plans to establish an electronic bulletin board for information on Battle Lab activities. It is listed under Major Commands/ TRADOC in the directory.

Procurement Offices in both TRADOC and AMC maintain guides for industry and announcements of local procurements. TRADOC contracting activities which support a Battle Lab are especially focused on the needs of that organization.

Small and Disadvantaged Business Utilization (SADBU) offices assist small and minority-owned businesses in dealing with government procurement. They provide information to such businesses and advise contracting officers when to set aside certain procurements for specified types of businesses. The AMC and TRADOC SADBUs are listed in the directory. They can either provide help directly or guide businesses to an appropriate subordinate SADBU.

The Commerce Business Daily (CBD) is the government's official bulletin board for industry. It is used to announce most procurements, solicit interested sources, seek comments on proposed courses of action and inform industry of other events. The CBD is available for review at some SADBUs, TILOs, and ARL/RDEC libraries. The CBD is available on line via computer, and also offers a subscription service which provides specific announcements and solicitations.

International and Foreign Disclosure Offices are available for assistance and guidance concerning international aspects of Battle Lab Activities. The U.S. Army wants to leverage the best worldwide technology for the soldiers, so foreign companies may be involved as competitors or as teaming partners. Points of contact are listed in the directory.

Program Opportunities

In 1974, the Army created the Advanced Concept Team, later designated as the **Advanced Concept and Technology (ACT) Program**, to provide an alternative route for the entry of novel technology application approaches to meet Army needs. This year, the Army has redirected the ACT Program to provide a timely, low-overhead mechanism for industry participation in the Battle Labs activities and the LAM process. This new program, designated **ACT II**, will serve as a "point of entry" to the Battle Labs for industry and academia. With Congressional support, the Army intends to ultimately invest \$40 million per year in the ACT II Program. It will respond to high priority technology needs identified by the Battle Labs and LAM Task Force; support industry participation in selected Advanced Warfighting Demonstrations and Experiments; demonstrate advanced concepts and technologies using various modes, including DIS; and foster early cooperation between warfighters at Battle Labs and the industry/government research and development communities.

Broad Agency Announcements (BAA) are an important mechanism to communicate with industry. A BAA identifies a general area of basic or applied research not related to a specific system or hardware procurement. Proposals are evaluated against the criteria

specified in the announcement. BAAs are announced in the CBD.

An EBB has been established at the Army Research Office to provide specific information on the BAA and the ACT II Program. The EBB can be accessed by calling (919) 549-4301.

Various **AMC programs** and BAAs executed by the RDECs and ARL cover most of the relevant technology areas. Coordination through the BTT may result in the availability of funds from these sources.

TRADOC funding may be available to support limited exploration of the military value of a technology concept through the TRADOC Concept Evaluation Program.

Requests for Proposals (RFP) solicit proposals to attack a specific Army problem for which the work statement is defined. In some cases bidders are asked to recommend a technical approach. Proposals compete on the basis of technical excellence and cost. RFPs are announced in the CBD.

The **Small Business Innovation Research Program (SBIR)** supports efforts by small for-profit firms. Two project phases are funded under the SBIR program. The first is feasibility demonstration — \$100,000/six months or less. About one-third of the projects enter the second phase, which is project execution — \$750,000/two years or less. A new law permits the government to

contract for a third phase —funded outside the SBIR program — without further competition. In FY93, the Army SBIR program will receive about \$77 million. The Army participates in DoD solicitations published twice a year. Usually, one issued in May closes in early July and another issued in October closes in early January. To receive copies in the states of Virginia, Alaska and Hawaii, call (703) 274-6902; elsewhere in the United States, call (800) 368-5211. For information, contact the Army SBIR program manager listed in the directory on page 19.

Government solicitations, such as BAAs, RFPs and SBIR solicitations, which appear in the CBD, are generally announced only when funding is reasonably assured. Unsolicited proposals will be evaluated and selected for support based on their quality and relevance, and on the availability of funds.

Independent Research and Development (IR&D) is planned and performed by contractors to maintain technical competence and develop enhanced capabilities. Most of the cost of work of “potential interest to DoD” is recoverable as overhead on subsequent contracts. In FY93, total DoD and contractor expenditure for IR&D will be over \$4 billion. Battle Labs may assist a company to focus IR&D on Army

needs — and potential markets. For information, contact the Army IR&D Manager listed in the directory.

A Cooperative R&D Agreement is an arrangement by which both industry and the Army can benefit by working together on a problem of mutual interest. Industry gains access to the Army’s unique laboratory facilities, its highly-qualified scientists and engineers, valuable patents and technical data, and computer software. The industrial partner can exclusively exploit the resulting intellectual property for commercial purposes, while the government retains a license for its own use. The nation benefits from a strengthened industrial base and enhanced global competitiveness. This new program creates exciting opportunities for teamwork between industry and Army R&D organizations, coupled to Battle Labs. For information, contact the Army Domestic Technology Transfer Program Manager listed in the directory under Cooperative R&D Agreements.

International Programs including the Nunn Cooperative Research and Development Program, Foreign Comparative Testing, U.S. -Canadian Defense Development Sharing Program and other programs for evaluating foreign technologies may be supplemental funding sources.

Protection of Intellectual Property

The Army is keenly aware of industry's legitimate need to have its new ideas, concepts, and proprietary items protected from unauthorized domestic and foreign disclosure. Therefore, Battle Labs will exercise due care to ensure that industry's intellectual property is not disclosed or used for any purpose other than evaluation.

Government personnel and contractors are, however, constantly engaged in research and development activities. The substance of any proprietary submission may already be known to the Army or it may be in the public domain. To avoid misunderstandings, industry should clearly mark any information it considers proprietary. If oral presentations are considered proprietary, recipients must be so informed; the same information should also be submitted in written form.

The Army has no intention of using any proprietary submission in which there is a recognizable property right without consent or compensation. However, the mere receipt by the Army of proprietary items or information does not imply a recognition of novelty or originality, or a promise to pay for use of information to which it is otherwise lawfully entitled. If a contract is awarded, it will govern the rights of the parties.

The Army has intellectual property rights of its own which it would like to share with industry for mutual benefit. This is achieved through Cooperative R&D Agreements or Patent License Agreements which allow industry to license valuable government-owned patents, software, or technical data. For more information, contact the Army Domestic Technology Transfer Program Manager listed in the directory.

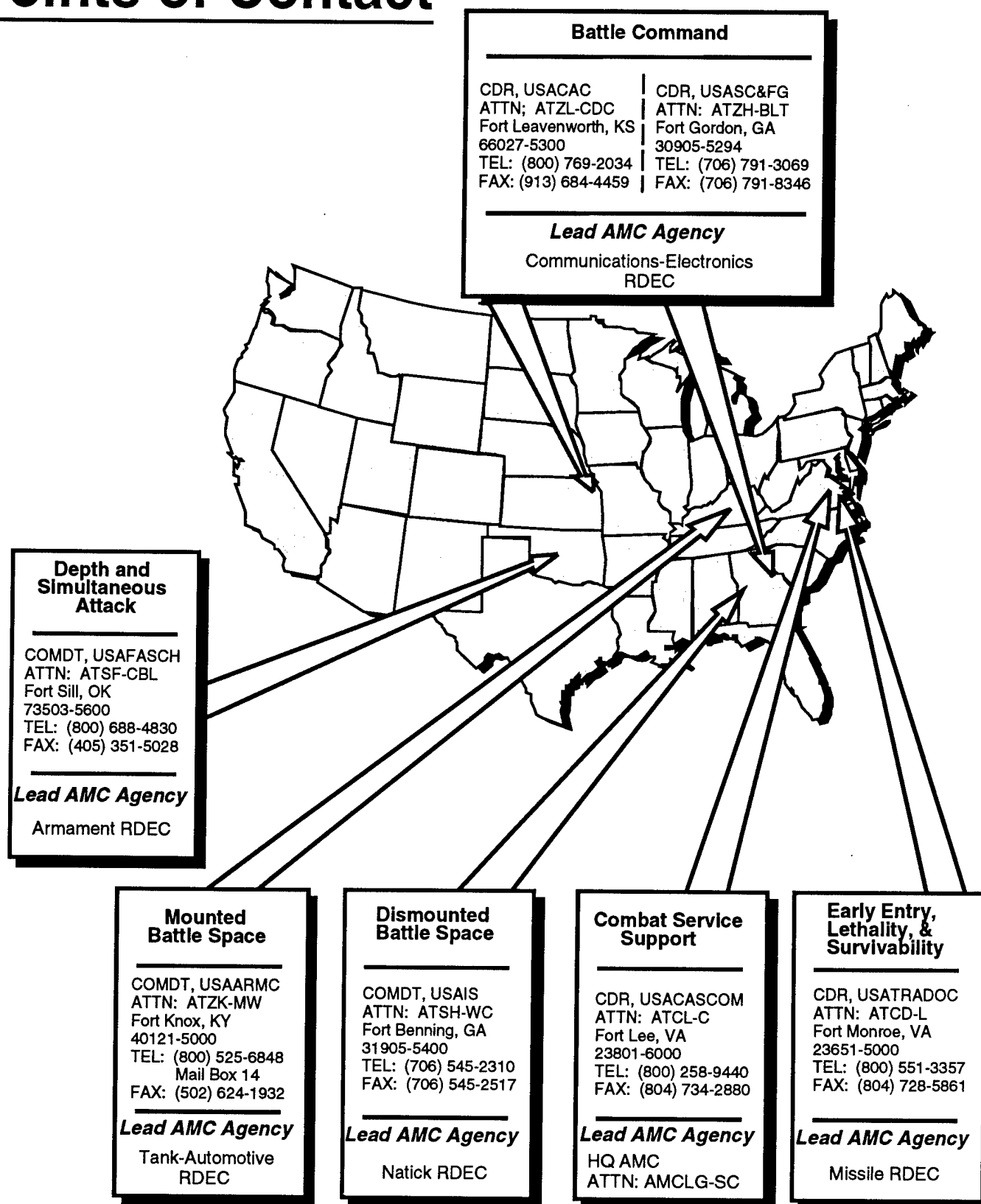
How Can Industry Participate?

Several suggestions:

- Discuss Battle Lab interests with the Battle Lab Point of Contact. Use the Information for Industry Program to find related AMC efforts. Scan the CBD for solicitations supporting Battle Labs. Attend Advance Planning Briefings for Industry. Obtain access to the EBBs for ARO (Act II) and STRICOM (DIS) Program information.
- Develop concepts and proposals for simulation or hardware demonstration that you can provide to meet Battle Lab and LAM needs. Emphasize areas where your unique capabilities provide an advantage.
- Respond to solicitations as specified therein. Use the Battle Lab contact to determine where to submit unsolicited proposals. Coordinate IR&D plans with appropriate RDECs/ARL and BTTs.
- Help the Army protect your proprietary information. Mark documents properly. Ensure recipients of informal information know exactly what requires protection.
- Competition is likely to be strong and limited funds may support only a small proportion of proposals. Ensure your proposals are technically sound, focused on Army needs, and in an area with a reasonable expectation of funding.



Points of Contact



Directory

Lead Agencies for Battle Labs/ AMC support

**Depth & Simultaneous Attack
Battle Lab**
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Director
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Electronics RDEC
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**Early Entry Lethality &
Survivability Battle Lab**
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U.S. Army Missile RDEC
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**Dismounted Battle Space
Battle Lab**
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U.S. Army Natick RDEC
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**Combat Service Support
Battle Lab**
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U.S. Army Materiel Command
ATTN: AMCLG-SC
Alexandria, VA 22333-0001
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**Mounted Battle Space
Battle Lab**
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Commander
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Commander
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Director
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& Instrumentation Command
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U.S. Army Belvoir RDEC
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Publications

15 U.S. Code 3710a, The Federal Technology Transfer ACT of 1986, October 1986

Public Law 98-369, "Competition in Contracting Act of 1984," July 1984

Public Law 91-441, Subpart 31.205-18, "Independent Research and Development (IR&D)"

DoD Directive 5000.1, "Defense Acquisition," February 23, 1991

DoD Directive 5000.2, "Defense Acquisition Management Policies and Procedures," February 23, 1991

DoD 4205.1-M, "Selling to the Military"

"DoD Key Technologies Plan," Director of Defense Research and Engineering, July 1992

Army Federal Acquisition Regulation Supplement (AFARS)

Distributive Interactive Simulation (DIS) Modernization Plan
STRICOM

Distributive Interactive Simulation Master Plan, TRADOC

Federal Acquisition Regulation (FAR)

Defense Federal Acquisition Regulation Supplement (DFARS)

AR 73-1 "Test and Evaluation Policy," October 15, 1992

"Army Science and Technology Master Plan," Nov. 1992, Vols. I and II

"The Army Modernization Plan," Vols I and II, Annexes A through P

AMC-PAM 70-6, "Technical and Industrial Liaison Office R&D Opportunities for Industry," October 23, 1992

AMC-PAM 70-8, "Guide for Unsolicited Proposals," March 16, 1987

AMC-PAM 715-14, "How to Do Business with AMC," September 1992

AMC CIR 1-4, "Advance Planning Briefings for Industry and Other Communications Media," March 17, 1993

"Advance Planning Briefing for Industry Master Schedule (1993 through 1995)," February 28, 1993

TRADOC PAM 715-5 "Battle Labs: A Guide to Dealing with Industry," April 5, 1993

“How to Do Business with Battle Labs: A Guide for Industry” was prepared by the Deputy Chief of Staff for Research, Development and Engineering’s RDT&E Integration Division and the Public Affairs Office of the U.S. Army Materiel Command.

Comments and suggestions will help improve this guide. We would like to hear from you on how this guide can be improved to better serve our customers. To obtain a copy of the guide or to make comments, please contact any one of the following offices:

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